Washington State Institute for Public Policy

Public Health Benefit-Cost Results

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our technical manual.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods.

School programs for physical activity to prevent obesity

Literature review updated April 2012.

Program Description: Programs in school that aim to increase children's physical activity and reduce sedentary behaviors include increasing knowledge about the benefits of physical activity; incorporating physical activity in the classroom with short periods of movement, exercise, dance, etc., interspersed between academic lessons; or increased time, frequency, and/or intensity of the physical education curriculum. Typically these programs are taught by classroom or physical education teachers who receive brief (< 1 day) training to deliver the intervention. The evaluations usually compare these programs to the standard health education and physical activity curriculum, which also provide opportunities to exercise and contain content on the importance of physical activity.

Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)			Adjusted effect sizes and standard errors used in the benefit-cost analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Body mass index (BMI)	Primary	12	-0.067	0.032	0.036	-0.047	0.032	12	-0.047	0.032	22

School programs for healthy eating & physical activity to prevent obesity

Literature review updated April 2012.

Program Description: Programs that focus on healthy eating and physical activity emphasize the balance between energy consumed and energy expended to stay healthy. These programs emphasize well-balanced meals, avoidance of energy-dense, low-nutrient foods and beverages, and the importance of daily physical activity and decreased sedentary behaviors (TV, computer games, etc.). The programs may also focus on self-awareness (e.g. exercise logs) and behavioral skills. These programs are typically taught by classroom or physical education teachers and compared to the standard health curriculum. In some school-based programs, integrated school-wide strategies to alter the school environment to support healthy eating and physical activity are used; such strategies include improving the nutritional content of cafeteria food or school vending machines, banning advertising of energy-dense products in school space, improving exercise facilities and play equipment, promoting events like “bike to school” days, and changing school policies (e.g. not selling candy for fundraising).

Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)			Adjusted effect sizes and standard errors used in the benefit-cost analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Body mass index (BMI)	Primary	20	-0.066	0.034	0.055	-0.047	0.034	11	-0.047	0.034	21

School programs for healthy eating to prevent obesity

Literature review updated April 2012.

Program Description: School-based programs for healthy eating include those that discourage children from consuming sweetened carbonated drinks and more comprehensive curricula that increase children's knowledge about healthy food choices, including the USDA's recommended food groups for a well-balanced meal: whole grains, lean proteins, and low-fat dairy. Some programs try to build self-monitoring skills such as keeping a food diary or recognizing cues that prompt intake of less healthy foods. In some programs, educational materials are sent to parents; typically, this content is part of the overall health education curriculum and taught by classroom teachers who have received brief training in nutrition guidelines and strategies for healthy eating for children. In the evaluation of these programs they are usually compared to the standard health education curriculum, which may also contain content on healthy eating.

Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)			Adjusted effect sizes and standard errors used in the benefit-cost analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Body mass index (BMI)	Primary	3	-0.099	0.014	0.000	-0.072	0.014	9	-0.072	0.014	19

Postponing Sexual Involvement (c)

Literature review updated April 2012.

Program Description: Postponing Sexual Involvement (PSI) is a two-stage program typically offered to 8th and 9th grade students. The program consists of five classes on human sexuality taught by a classroom teacher, followed by five classes on refusal skills taught by trained peer educators (11th- and 12-grade students).

Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)			Adjusted effect sizes and standard errors used in the benefit-cost analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Initiation of sexual activity	Primary	5	-0.187	0.098	0.000	-0.040	0.098	14	-0.040	0.098	24

School-based sexual education

Literature review updated April 2012.

Program Description: School-based sex education curricula provide information about and instruct students in skills for sexual abstinence; many programs also provide students information about birth control and ways to protect against sexually transmitted diseases (STD). We did not include programs that focused only on HIV or STD risk reduction because we focused on the prevention of teen pregnancy. We analyzed 14 studies of abstinence-only programs and comprehensive sexual health programs and found no significant differences (p=.65) in effects on teens initiating sexual activity; only comprehensive programs measured pregnancy outcomes. Usually the programs lasted less than 2 months, however, a few were offered over 2 school years. Students were typically middle-school to early high school age and most programs were lead by teachers who received training in the curriculum. An exception was abstinence-only programs, which were usually offered by trained outside facilitators and trained student peer-leaders. Programs evaluated included Draw the Line/Respect the Line (Coyle 2004), Safer Choices (Coyle 2001), Reducing the Risk (Barth 1992), Sexual Health and Relationships (Henderson 2007), Promoting Health Among Teens comprehensive education (Jermmott 2010), Project Taking Charge (Jorgenson 1991), McMasters Teen Program (Mitchell-DiCenso 1997), Randomized Intervention Trial of Pupil Led Sex Education (Stephenson 2008), It's Your Game: Keep It Real (Tortolero 2009), Managing Pressures Before Marriage (Blake 2001), For Keeps (Borawski 2005), Skills and Knowledge for AIDS and Pregnancy Prevention (Kirby 1997), and abstinence education (Treholm 2007).

Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)			Adjusted effect sizes and standard errors used in the benefit-cost analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Teen pregnancy (under age 18)	Primary	4	0.015	0.055	0.000	0.011	0.055	17	0.011	0.055	27
Initiation of sexual activity	Primary	14	-0.058	0.041	0.000	-0.028	0.041	15	-0.028	0.041	25

School-based service learning

Literature review updated April 2012.

Program Description: School-based service learning programs promote integration of service-learning in the school curriculum and deliver services to the community. Students are involved in community field experiences in nursing homes, senior centers, and child centers, among other locations. This program is coupled with classroom discussions of their experiences to reinforce social and critical skills and help students develop as individuals and as engaged citizens. Health education and/or social studies may be included in the curriculum. Typically, these programs target higher risk student populations.

Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)			Adjusted effect sizes and standard errors used in the benefit-cost analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Teen pregnancy (under age 18)	Primary	3	-0.199	0.194	0.000	-0.162	0.194	16	-0.162	0.194	26

Teen Outreach Program

Literature review updated April 2012.

Program Description: Teen Outreach Program (TOP) is a volunteer service learning program for high school students, aimed at high risk adolescents, and consisting of supervised community volunteer experience (e.g. in nursing homes, senior centers, child care centers) of between 20 to 40 hours per school year to increase students' social engagement with peers, teachers, and community adults. This is coupled with classroom discussions of the volunteer experience as well as other topics (15 percent or less on sexuality) with trained teachers/facilitators. Trained program staff coordinate the placements of students with community agencies.

Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)			Adjusted effect sizes and standard errors used in the benefit-cost analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Teen pregnancy (under age 18)	Primary	2	-0.554	0.209	0.000	-0.270	0.209	17	-0.270	0.209	27

Adolescent Sibling Pregnancy Prevention

Literature review updated April 2012.

Program Description: Adolescent Sibling Pregnancy Prevention Project was conducted in California to prevent pregnancy among adolescents with a pregnant or parenting teenage sibling, a group identified as high risk of early pregnancy. The intervention is delivered by non-profit social service agencies, school districts, and public health departments to youth 11 to 17 years old. There is no prescribed intervention except for a once-a-month face-to-face meeting with the youth and a case manager; most locations offer a variety of activities.

Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)			Adjusted effect sizes and standard errors used in the benefit-cost analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Teen pregnancy (under age 18)	Primary	1	-0.188	0.052	0.000	-0.094	0.052	14	-0.094	0.052	24
Initiation of sexual activity	Primary	1	-0.282	0.058	0.000	-0.141	0.058	14	-0.141	0.058	24
Truancy	Primary	1	-0.078	0.043	0.069	-0.039	0.043	14	-0.039	0.043	24

For further information, contact:
(360) 586-2677, institute@wsipp.wa.gov

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Washington State Institute for Public Policy

The Washington State Legislature created the Washington State Insititute for Public Policy in 1983. A board of Directors-representing the legislature, the governor, and public universities-governs WSIPP and guides the development of all activities. WSIPP's mission is to carry out practical research, at legislative direction, on issues of importance to Washington State.